

Lecture

Diarrhoea

Monk

Lecture

Diseases of Nutrition and Evacuation Diarrhœa

Another of the diseases of the nutritive and evacuator system, which will claim our present attention will be diarrhœa. This term is derived from the Greek words, ^{Latin} perfluo ^{I flow through} - in common language looseness, purging, flux, and lax. It essentially consists in more frequent and more liquid evacuations by stool, than is usual to the individual. Diarrhœa may be defined to be the discharge of the bowels, attended by occasional griping pains, which when present are perfectly relieved by the evacuation, and there is no fever. I have mentioned pain and griping, but these symptoms are not always present.

It is a disease of trifling importance; but if permitted to continue, it is very frequently productive of very serious consequences: it may occur as an independent or unaccompanied disorder; and is ^{in many diseases} a common symptom.

In the definition of this disease, I have mentioned the frequent purging as constituting its peculiar character; it should be recollected that this leading and characteristic symptom is so diversified in its degree, in its causes, and in the variety and matter evacuated, that makes it a subject of difficulty to give any general history of the disease; besides it not only varies greatly as an idiopathic affection, but is a common or accidental attendant upon many disorders both

acute and chronic, general and local. Diarrhoea is sometimes the first symptom of a crisis in fever; sometimes the consequence of local inflammation of the intestinal mucus membrane; sometimes present in the closing stages of Phthisis Pulmonalis and other protracted diseases. Hence in order to decide upon its nature, and more particularly to regulate its treatment with propriety and success, it is obviously necessary to investigate its rise, progress, variety, duration, or recurrence; its preceding and accompanying symptoms, and its assigned or probable causes with minuteness and accuracy.

On your investigations into the character of this Disease, you should recollect not to confound it with cholera morbus or ^{with} dysentery.

For the leading characteristic symptoms in both these diseases resemble diarrhoea.

Diarrhoea may be distinguished from ^{ordinary} cholera, chiefly by the difference in their causes, which, in cholera, ^{morbus} are of one peculiar kind - that is a profuse discharge of bile; and also by there being vomiting in cholera which there is not in diarrhoea. The evacuations in diarrhoea are very various: in cholera, ^{morbus} they consist altogether of bilious matter, which, besides being vomited, is freely passed off by stool.

Diarrhoea may be distinguished from Dysentery, by there being an absence of fever, and by the evacuations consisting of the natural feculent matter, though in a more liquid state, and by the absence of tenesmus or violent bearing down: a symptom peculiar in dysentery. In Dysentery there is more severe griping than in diarrhoea; but this cannot be laid down as undeniably distinctive, for this symptom occasionally occurs in diarrhoea. There is however a mutual reliance between the two diseases, which occasionally

and the first symptom of a cold in the
respiratory system is the
presence of a certain degree of
inflammation in the
mucous membrane of the
nasal cavity and the
pharynx. This is
usually accompanied by
a feeling of heat and
tenderness in the
affected parts. The
secretion of mucus is
increased and the
color of the mucus is
usually yellowish or
greenish. The
inflammation may
spread to the
sinuses and the
throat. The
symptoms are
usually relieved by
the use of
warmth and
rest. The
disease is
usually
self-limiting.

pass into each other; a diarrhoea, if neglected or improperly treated, is sometimes converted into a dysentery; and a dysentery, when its worst symptoms have been subdued, sometimes passes off in the form of diarrhoea. Dr. Fullen makes the contagious nature of Dysentery as a distinctive character from diarrhoea, but as we do not admit this to be correct, at any rate, as applicable to the diseases of this country, I have only mentioned it, to make the Diagnostic signs as full as possible.

It would be more consonant with our present pathological knowledge to hold Diarrhoea as universally symptomatic of a great variety of diseases, many of which are different from one another; so that were we to attempt to nosologise from all these, the genus would be very complicated, and would comprehend many dissimilar affections and diseases.

If it were possible that we could regard Diarrhoea as merely symptomatic of different pathological states, we might erase it from the list of individual diseases; at present, however, we are far from having attained to such perfection in pathology. The safer plan in our study of this disease, is to consider the purging, termed diarrhoea, as a distinct disease, not forgetting to regard it as a consequence of various morbid-states in different cases; taking all care, before you prescribe your treatment, to ascertain the particular state which exists in the individual case before you, as far as your observation and pathological knowledge will enable you to do so.

If you do not take this into particular account, and regard the purging only, you may be liable to commit serious errors in your treatment.

I would advise you as a general rule, to look upon

...into each other; a disease if neglected or improperly treated
...converted into a dysentery; and a dysentery when it
...has been subdued, sometimes passes off in the
form of diarrhoea. The further marks the contagious nature of
...as a distinctive character from dysentery, but we do
not admit this to be correct at any rate, as applicable to the dis-
ease of this country. I have only mentioned it to make the
diagnostic signs as full as possible.
It would be not consistent with our present purpose
...to hold diarrhoea as universally synonymous with
a great variety of diseases, many of which are different from
...; so that there are no attempts to distinguish from all the
the genus would be very complicated, and would require a
distinct classification and diseases.
Of it were possible that we could regard diarrhoea as
merely symptomatic of different pathological states we might
...it from the list of individual diseases at present, but
we are far from having attained to such perfection in pathology.
The safer plan in our study of this disease is to consider the
... as a distinct disease, not forgetting to
regard it as a consequence of various morbid states in different cases.
Taking all care, before you prescribe any medicine, to ascertain
the particular state which exists in the individual case, and
... as your observation and pathological knowledge will
enable you to do so.
Of you do not take this into particular account
regard the purging only, you may be liable to commit an error
in your treatment.
It would be in vain as a patient with this disease

The diarrhoea which always attends the latter stages of *Shtr* depends on ulceration of the mucous membrane. I have seen the ulcers in this state of the bowel: they are extremely numerous, spread over the whole extent of the bowels, but most commonly near the extremity of the ileum.

Many other organic affections of the mucous membrane of the bowels, for the most part the consequence of inflammation, give rise to diarrhoea; but they do not properly come under our present consideration: they should however, be recollected as when existing to modify in a peculiar manner the treatment of this disease.

The state of the mucous membrane found in dissection in simple diarrhoea, varies greatly in different cases. ^{*} In recent examples, we seldom have an opportunity to ascertain its condition, as almost all such cases are cured. When opportunities of examination occur in recent cases, the membrane is more or less red and congested, or extremely pale or anæmic, the redness being disposed in patches or stripes, leaving the intervening portions very pale. In cases of long standing and great severity, where the condition of dysentery occasionally occurred, the membrane presents every variety of colour, from the most intense red, purple, or brown, to the blanched or anæmic state, in which there is nothing to be seen in the colourless vessels but colourless fluid. In other cases there is an enlarged and patulous condition of the mouths of the mucous follicles, which look erected, and sometimes inflamed, and as if excoriated. The whole mucous membrane is also found thickened and edematous, as in certain forms of dropsy, and is often greatly softened. The intestinal tube is frequently found much contracted in its caliber. I have attended cases where this condition of the colon was present, and gave to the cases a very obstinate character.

X
" But where the disease terminates fatally the intestinal mucous membrane and follicles are found in the following condition.

In the aggregated patches of the villous membrane there adheres much mucus. On the removal of this the patches are observed elevated, roughened, and indurated in various degrees. In some the elevation is moderate; in others great and perceptible, giving them the appearance of pustular eminences, or rendering them like buttons on the villous membrane. This elevation is generally occasioned by the thickening and death of the follicular cellular tissue, which is hard, friable and of a yellow colour. In certain parts of the ~~membrane~~^{intestine} the mucous membrane is cast off, disclosing small ulcers; the base of which is sometimes yellow and is constituted of the follicular cellular tissue or the muscular and peritoneal coat of the bowel. These ulcers take place in individual follicles; and two or more coalesce and form a large ulcer. The adjoining intestinal membrane is occasionally but not always thickened. The mesenteric ganglions of the site are enlarged in various degrees and to different extent. At some points we meet a whole cluster of glands enlarged; at other two or three are enlarged but separate.

In extreme cases albuminous exudation covers the peritoneum corresponding to the patches of the ulcer; and in some cases the peritoneum has been perforated previous to death, allowing the escape of the contents of the bowel, and followed by effusion of sero-albuminous fluid from the internal or free surface of the perineum. (Bragie)

On some cases you may find coagulable lymph adherent to the inflamed spots; but this is not a frequent occurrence. We are told by Andral and Casswell that in some cases dissection detects scarcely any deviation from a state of health; in these cases we have reason to suppose that the exhalents and mucous glands merely afford a rapidly increased secretion ~~secretion~~. (See Appendix)

I have merely hinted at the different terms applied to the different forms which Diarrhoea assumes. The varieties in colour, smell, and appearance of the dejections, I have said, have given origin to the particular denominations for certain forms of the disease, but they also afford important instruction to the practitioner in his inquiry into the seat and cause of the affection. Thus, when the stools are of the proper stercoraceous quantity, the diarrhoea, which often arises from an overgorging of the stomach with too much food, has been laid down under the term *Diarrhoea crapulosa* or *Feculent*. When the food passes off by stool in an undigested state, it is termed *Diarrhoea Sienteria*; most writers have considered this as a distinct disease; but it is only a variety of *Diarrhoea*. The same observation applies to diarrhoea *caliaca*, or caliac passion, when the stools are of a milky appearance, and are supposed to consist chiefly of chyle, which passed the mouth of the lacteals without being absorbed. When the stools consist of much glairy mucus, the term *mucosa* or *pituitosa* is prefixed: the secretion of the mucous of the intestines is particularly increased by acrid substances passing through them, such as drastic purgatives. When watery and thin the term *Colligative* or *serous*; when black-*malana*; when an excess of bile-*bilious*.

It should be recollected that the essential part of this disease consists in a preternatural increase of the peristaltic motion, and of the secretions, in the whole or a great part of the intestinal canal; and the predisposing cause of the disease, is a peculiar irritability of the intestines and of their exhalents or secreting vessels. One of the most common of the exciting causes is the direct application of stimulants to the interior of the tube. Errors in diet, either in quantity or quality often act this way. When a great quantity of different kinds of food and drink is taken at the same meal, a sudden attack of diarrhoea is often brought on. In some persons a drink of cold water, beer, milk, will if they are heated, bring on an attack of this disease. The use of ice very frequently produces an attack. Unwholesome articles of diet will produce it - Meat slightly putrid, raw vegetables, cucumbers, melons, mushrooms, salads &c. Dentition in children is a cause of diarrhoea - Measles, scarlatina and other exanthemata excite it. In gastric and enteric fever it is often an attendant. It is often the initiatory stage in cholera and dysentery - Other causes give rise to diarrhoea, and in a more direct manner - exposure to cold, cold and wet feet, a damp and cold atmosphere; alternations of temperature, suppressed evacuations, as checked perspiration, checked menstruation, the disappearance of abscesses. The states of mind will produce diarrhoea - persons of nervous temperament are subject to it from mental agitation, anxiety or surprise: when such mental states are present, the least error in diet will be followed by diarrhoea or liquid discharges from the bowels. Diseased secretions of the liver and the other glands that throw their secretions in the intestinal canal, as well as irritating secretions from the mucous

membranes themselves, are also causes of Diarrhoea. Gout in many instances appear to maintain a tendency to loose discharges from the bowels, and to expend itself by this outlet. This is the diarrhoea arthritica of Savarage, and you will find many notices of it in the works of Sydenham and Baglivi.

I have known individuals to have an attack of Diarrhoea from a change of water. Persons travelling are apt to have it occasioned by this cause. Diarrhoea often prevails epidemically without our being able to trace the precise cause; but in such cases it is commonly accompanied by catarrhal affections of other mucous membranes.

An attack of Diarrhoea, ~~is~~ in most instances from whatever cause it may proceed, is preceded by feelings of indigestion, nausea, flatulence &c.

It is usually attended by more or less of pain or uneasiness in different parts of the ~~bowel~~ abdomen, more especially before the patient goes to stool.

In the more severe forms the abdomen is often swelled, hot, painful to the touch, and the discharges are announced by searching pains of various degrees, sometimes slight, sometimes very severe, and attended occasionally by fainting, and frequently by nausea or even vomiting. The pain appears to follow the transit of the alimentary mass, and to be connected with the peristaltic contractions of the muscular coat of the intestines. The discharges take place without effort, and in some instances are involuntary. The patient feels weaker after each operation, yet experiences some relief from the pain, tension, and flatulent movements. The number of the stools are various in different cases. I have known them to amount to 40 in 24 hours.

but generally 10, 15 and 20. On the commencement of the attack they are abundant in quantity; afterwards more scanty, and whatever may have been their original condition, they consist of serous fluid chiefly, mixed with mucus, with or without bile, and often with fibrous threads.

The discharges are more fetid in proportion to the quantity of fetid matter in them.

Paleness and wasting of the body accompany the severer attacks; likewise a sense of chilliness, dry skin, a loaded tongue, and a diminution of the urinary secretion. As the disease advances the patient becomes so enfeebled as to be forced to keep his room and bed. The termination of diarrhoea, when unattended by other, and especially visceral diseases, is for the most part favourable; but our judgment as to the event of this disorder, must be deduced from a consideration of its nature and causes, from the age, constitution, and previous state of health of the patient; from the assignable causes of the disease, its duration, its concomitant symptoms, and its effects upon the constitution and general habit of the patient, and likewise from the operation of the remedies which we employ for its removal. When the inflammatory state of the membrane becomes considerable, and assumes a dysenteric form, it may lead to very serious results; ulceration may take place in the different intestinal tissues, sometimes followed by perforation, and fatal peritonitis. In some cases the inflammation of the mucous coat may be transferred to the serous coat, and cause death by dropsy. When it assumes the chronic form, Diarrhoea is sometimes a most obstinate disease, resisting in many cases for months and years, every variety of treatment.

but generally to be made in the same manner as the
attack, this is not a constant in quantity; sometimes more than
one attack may have been the original condition, but
consist of several slight attacks, which may be more or less
without any, and after some time the attacks
The duration of the attacks is not fixed, but
quantity of fluid matter in them
The attack and passing of the fluid matter from the
attack; likewise a sense of chilliness, shivering, a
tongue, and a diminution of the urinary secretion. As the
these advance the patient becomes so affected as to be
to keep his room, and bed. The termination of the attack, when
interrupted by sleep, and especially violent sleep, is for
the most part permanent; but on judgment as to the extent of
his disorder, must be directed from a consideration of its
nature and course, from the age, constitution, and former state of
health of the patient, from the respective causes of the disease,
its duration, its concomitant symptoms, and its effects upon the
constitution and general habit of the patient, and likewise
from the operation of the remedies which are employed for its
removal. Thus the inflammatory state of the membrane
becomes considerable, and assumes a different form, it may
lead to very serious results; sometimes may take place in the
different portions of the system, sometimes followed by local action
and fatal results. In some cases the inflammation of
the membrane may be transferred to the brain, and in such
cases death by apoplexy. When it assumes the chronic form,
it is more or less attended with chronic disease, existing
in many cases for months and years, and consists of

When it is not immediately dependant on organic change in the intestines or viscera connected with them, the general health is often much affected, and the diarrhoea may in these instances continue occasionally recurring for many years, and indeed, in the case of my own mother, it remained by her for nearly 20 years; occasionally recurring until finally disorganization by ulceration occurred, and after the presence of pus, in considerable quantities, she survived nearly 18 months but it was through the closest and undeviating adherence to proper regimen.

From what has now been advanced upon the history and character, causes and prognosis of Diarrhoea, you come better prepared to understand the measures proper for its relief or removal.

In the treatment of this disease, it is of much importance to consider its degree of severity and duration. Slight cases of every variety may be removed, and in recent cases even when severe, the mode of cure is almost always simple, and if properly adhered to, successful.

In a recent attack of diarrhoea, especially when produced by improper food, all that is necessary is abstinence from food, simple dilution, and rest. But, sometimes in despite of this, the evacuations are too profuse; the irritating matter acts like a drastic purge; or the ineffectual efforts produced by the primary cause have been raised beyond the healthy degree, and the hypercatharsis continues.

x The leeches should be applied over the seat of ^{tenderness} ~~tenderness~~,
or around the verge of the anus. In painful ^{symptoms} ~~symptoms~~ sometimes
accompanying diarrhoea, their application ^{of leeches} is decidedly beneficial.

In cases of this kind laudanum with castor oil will act well, especially when combined with quiet, warm bed, and abstinence.

In all these cases the safest practice is to give castor oil; but should the persons have been hearty eaters, and with constipated bowels, Ext: Colicst with Calomel and antimonial powders will answer, to be followed by senna and saline draughts.

If feculent diarrhoea is complicated with a profuse secretion of bile, it will be necessary to restore the liver as well as the bowels to its healthy functions. The evacuation of the bowels by purgatives will be first necessary; but when this is effected, the treatment of the liver complication may be a work of some time. If inflammatory fever is present, which is sometimes the case in this form, bloodletting will be demanded; local bleeding with leeches will answer, and repeated according to circumstances. * Mild mercurial preparations should follow; they must be the mildest kind - Hydrag: c. creta or blue mass, at bed time, followed in the morning with castor oil, but purging should by no means be instituted. When the inflammatory condition is removed, small doses of Calomel may be beneficial - also the occasional use of saline and demulcent drinks and proper ^{farinaceous} diet.

~~The internal remedies deserve to be~~

The internal remedies which have been employed are as various as the ^{pathological} conditions of ~~the~~ the diarrhoea. As a general direction the patient should be ordered to drink copiously of mucilaginous infusions. Dr Cullen in his treatment of diarrhoea is particularly urgent upon the necessity of drinking plentifully of diluents and demulcents.

The diet of your patients must be strictly attended to both during the presence of the disorder, and for some time afterwards, as a recurrence of the affection is frequently ~~the~~ occasioned by improper food. The physician should be positive to his patient in regard to the quantity and quality of nourishment. ~~The diet~~ Rice and barley water, thin arrow starch, sago, tapioca, and farina should be ordered during the irritated stage of the disease. From these he may cautiously pass on to the animal broths, and soups, of chicken, mutton &c.

After having removed the offending mischief, and corrected the deranged and irritated condition of the bowels, the purging may continue, when it will be necessary to restrain the frequency by the administration of some one of the astringents or a combination of this class of remedies with sedatives.

For this purpose a combination of prepared chalk with the Tinct of Gum Kino and aromatic confection with laudanum, is preferred by many physicians. Dr Johnson in his work on the Diseases of Tropical Climates highly recommends this prescription as an excellent and effective astringent ⁱⁿ ~~in~~ ^{in cases of} diarrhoea, after proper preparatory treatment. He directs ℥ij of Aromatic Confection; ℥ij creta preparata; ℥ij to ℥ss Tinct Kino; ℥i of laudanum in ℥viij water - A tablespoonful of this mixture to be given after every liquid operation - Where the diarrhoea is kept up by a relaxed and debilitated condition of the intestinal membrane this I have frequently found an effective and satisfactory remedy. But in other cases of the disease where the purging continues from irritability alone, Dover's powder, Hydrargyrum cum creta, with a quarter of a grain of Calomel repeated as circumstances call for, generally answers the purpose.

Some practitioners in the diarrhoea of irritability of the intestinal membrane prefer acetate of lead combined with acetate of morphia or with opium; and this combination in my hands has frequently ^{been} useful. I may here caution you against the persistent employment of the acetate of lead, not only in this disease, but in other ^{affections} requiring astringents, as it is the idiosyncrasy of some persons to be easily and seriously poisoned by the smallest quantity of the lead contained in the preparation.

While administering this mineral care should be paid to the state of the gums; they should be daily examined and on the appearance of ~~the~~ blue ~~spots~~ tinge where they meet the teeth, it should be laid aside. In those cases requiring astringents I have preferred tannin, and found it ^{more safe} equally ^{certain and} beneficial as the acetate of lead without its inconveniences and danger. The tannin may be combined with the morphia or opium ~~and~~

Among the class of astringents employed in the treatment of diarrhoea, you will find it sometimes necessary to resort to Alum, tormentilla, geranium maculatum, oak bark, logwood, Catechu, the bark of the sweet gum tree, and Kalmia latifolia or broad leaved laurel. Each of these agents singly or combinedly will be found when suitably applied to the states and conditions of the disease, to possess useful and curative powers. Dr. Hatcher in his American Practice of Medicine speaks highly of the Kalmia latifolia, and directs one ounce of the leaves in Eight ounces of water boiled to six ounces; the dose thirty drops six times a day.

The summer of 1857 during the prevalence of diarrhoea and dysentery, after having allayed the irritation and ~~in~~ inflammation of the mucous membranes ^{of the bowels} by appropriate local abstractions of blood and Calomel purgatives, I had recourse to a decoction of the Sweet gum ^{tree} bark, a common tree in our woods, and with very decided

beneficial results. This was a common remedy during this season in the diarrhoeas and dysenteries which were prevailing extensively in our State, and as such passed the rounds of the public papers, as the best & most efficient remedy. But as are all the remedies prescribed for this disease, success depends upon a proper preparation of the patient and the time and perseverance in the use of means; never forgetting the nature, pathological condition, influence of season & the cause operating to its production. Without a regard, and an especial one to these respective circumstances, singly, and as a whole, our practice is empirical, and we may or we may not be successful in our treatment, as chance and hazard may direct us.

In your treatment of diarrhoea arising ~~from~~ in consequence of some moral, or violent affection of the mind, it should be simple. Instead of irritating vomits and purgatives, endeavour to calm the perturbed mind, and allay the commotion of the body. And this will best be effected by giving small doses of Opium; repeated as often as circumstances require.

In these cases I have frequently directed small doses of the Solution of the muriate of Morphia, gradually increasing the quantity to a restraint upon the bowels and ^{the induction of} sleep.

In chronic cases of diarrhoea, where from repeated ^{acute} attacks, and progressive derangement of function, there follows disorganization of the intestinal follicles and mucous membrane in ulceration and discharge of pus, the physician has a combination of effects of difficult management, and under the most judicious and persevering course of diet and treatment will most generally prove fatal. When the ulcerations

are situated within the anus and can be observed by the speculum ani, by the application of the solid nitrate of silver, they are remediable. In cases of diarrhoea ~~where~~ in which pus is contained in the discharges, the rectum should be explored by the instrument, to detect the presence of ulcers, if they should exist, that the appropriate treatment of Cauterization ~~should~~ ^{may} be immediately instituted. I have witnessed frequent cases of chronic diarrhoea of frequent occurrence and of long standing, in which the patients were reduced to the lowest state of exhaustion and emaciation, and discharging pus in the evacuations; and which resisted both scientific and empirical modes of treatment, until the attention of the patient was directed to the probability of the existence of ulcers within the rectum, and upon discovery, and the application of the nitrate of silver, they were quickly healed; the diarrhoea ceased, and in a few weeks the patients entirely recovered their wonted health and weight of person. In all cases of protracted diarrhoea and especially where pus is contained in the excretions, the practitioner should demand and insist upon the exploration of the bowel by means of the speculum.

Where there is an appearance of ulceration, the sulphate of Copper, combined with opium or sulphate of Morphia, and gum Ammoniac, are the remedies most generally selected by practitioners. In these cases where the ulceration ~~was~~ ^{is} about the upper portions of the rectum and the colon, I have seen this combination of medicines serviceable. They, ^{however,} require to be cautiously given and to be continued a long time with gradual increase of dose to effect certain and lasting curative influences. Some physicians speak highly of the Balsam of Copaifera, Spirits turpentine & the nitrate of silver

internally in these conditions of the bowel. Whichever be selected, with it counter irritation, by means of ordon oil, tartar Emetic ointment, blisters &c. should be associated. And at the same time, the closest attention should be paid to the diet, drinks and dress of the patients.

